IN THE CLAIMS:

1. (Currently amended) A method of establishing a connection between a first node and a second node in a system area network, comprising:

allocating a virtual connection unit pair to the connection, the virtual connection unit pair being associated with the first node;

associating the virtual connection unit pair with a physical connection unit pair that is used for transporting data using the connection, the physical connection unit pair being associated with the first node;

establishing the connection between the virtual connection unit pair of the first node and a connection unit pair of the second node; ~~and~~

transmitting one or more messages between the first node and the second node over the connection using the virtual connection unit pair; and

tearing down the connection between the first node and the second node, wherein tearing down the connection includes placing the virtual connection unit pair in a time-wait state.

2. (Original) The method of claim 1, wherein the connection unit pair is a queue pair.

3. (Original) The method of claim 1, wherein the connection unit pair is an end-to-end context.

4. (Currently amended) ~~The method of claim 1~~ A method of establishing a connection between a first node and a second node in a system area network, comprising:

allocating a virtual connection unit pair to the connection, the virtual connection unit pair being associated with the first node;

establishing the connection between the virtual connection unit pair of the first node and a connection unit pair of the second node; and

transmitting one or more messages between the first node and the second node over the connection using the virtual connection unit pair, wherein the virtual connection unit pair has only a virtual connection unit pair identifier and an availability bit.

5. (Currently amended) The method of claim 1, wherein allocating a virtual connection unit pair to the connection includes[[:]] selecting the virtual connection unit pair from a virtual connection unit pair pool[[;]] and wherein the physical connection unit pair each comprises a send and receive queue for accessing the connection ~~associating a virtual connection unit pair identifier of the virtual connection unit pair with a physical connection unit pair of the first node~~.

6. (Cancelled)

7. (Currently amended) The method of claim ~~6~~ 1, wherein ~~a~~ the physical connection unit pair associated with the first node is not placed in a time-wait state.

8. (Currently amended) The method of claim ~~6~~ 1, wherein a physical connection unit pair associated with the first node is used to establish another connection while the virtual connection unit pair is in the time-wait state.

9. (Currently amended) The method of claim ~~6~~ 1, wherein placing the virtual connection unit pair in a time-wait state includes setting an availability bit associated with the virtual connection unit pair.

10. (Original) The method of claim 5, wherein the virtual connection unit pair is selected from virtual connection unit pairs in the virtual connection unit pair pool that are not in a time-wait state.

11. (Currently amended) A computer program product in a computer readable medium for establishing a connection between a first node and a second node in a system area network, comprising:

first instructions for allocating a virtual connection unit pair to the connection, the virtual connection unit pair being associated with the first node;

second instructions for associating the virtual connection unit pair with a physical connection unit pair that is used for transporting data using the connection, the physical connection unit pair being associated with the first node;

~~second~~ third instructions for establishing the connection between the virtual connection unit pair of the first node and a connection unit pair of the second node; ~~and~~

~~third~~ fourth instructions for transmitting one or more messages between the first node and the second node over the connection using the virtual connection unit pair; and

fifth instructions for tearing down the connection between the first node and the second node, wherein the fifth instructions for tearing down the connection include instructions for placing the virtual connection unit pair in a time-wait state.

12. (Original) The computer program product of claim 11, wherein the connection unit pair is a queue pair.

13. (Original) The computer program product of claim 11, wherein the connection unit pair is an end-to-end context.

14. (Currently amended) ~~The computer program product of claim 11~~ A computer program product in a computer readable medium for establishing a connection between a first node and a second node in a system area network, comprising:

first instructions for allocating a virtual connection unit pair to the connection, the virtual connection unit pair being associated with the first node;

second instructions for establishing the connection between the virtual connection unit pair of the first node and a connection unit pair of the second node; and

third instructions for transmitting one or more messages between the first node and the second node over the connection using the virtual connection unit pair, wherein the virtual connection unit pair has only a virtual connection unit pair identifier and an availability bit.

15. (Currently amended) The ~~method~~ computer program product of claim 11, wherein the first instructions for allocating a virtual connection unit pair to the connection includes[[:]] instructions for selecting the virtual connection unit pair from a virtual connection unit pair pool[[;]] and wherein the physical connection unit pair comprises a send and receive queue for accessing the connection ~~instructions for associating a virtual connection unit pair identifier of the virtual connection unit pair with a physical connection unit pair of the first node~~.

16. (Cancelled)

17. (Currently amended) The computer program product of claim ~~16~~ 11, wherein ~~a~~ the physical connection unit pair associated with the first node is not placed in a time-wait state.

18. (Currently amended) The computer program product of claim ~~16~~ 11, wherein a physical connection unit pair associated with the first node is used to establish another connection while the virtual connection unit pair is in the time-wait state.

19. (Currently amended) The computer program product of claim ~~16~~ 11, wherein the instructions for placing the virtual connection unit pair in a time-wait state include instructions for setting an availability bit associated with the virtual connection unit pair.

20. (Original) The computer program product of claim 15, wherein the virtual connection unit pair is selected from virtual connection unit pairs in the virtual connection unit pair pool that are not in a time-wait state.

21. (Currently amended) An apparatus for establishing a connection between a first node and a second node in a system area network, comprising:

means for allocating a virtual connection unit pair to the connection, the virtual connection unit pair being associated with the first node;

means for associating the virtual connection unit pair with a physical connection unit pair that is used for transporting data using the connection, the physical connection unit pair being associated with the first node;

means for establishing the connection between the virtual connection unit pair of the first node and a connection unit pair of the second node;

means for transmitting one or more messages between the first node and the second node over the connection using the virtual connection unit pair; and

means for tearing down the connection between the first node and the second node, wherein the means for tearing down the connection includes means for placing the virtual connection unit pair in a time-wait state.

22. (Original) The apparatus of claim 21, wherein the connection unit pair is a queue pair.

23. (Original) The apparatus of claim 21, wherein the connection unit pair is an end-to-end context.

24. (Currently amended) ~~The apparatus of claim 21~~ An apparatus for establishing a connection between a first node and a second node in a system area network, comprising:

means for allocating a virtual connection unit pair to the connection, the virtual connection unit pair being associated with the first node;

means for establishing the connection between the virtual connection unit pair of the first node and a connection unit pair of the second node; and

means for transmitting one or more messages between the first node and the second node over the connection using the virtual connection unit pair, wherein the virtual connection unit pair has only a virtual connection unit pair identifier and an availability bit.

25. (Currently amended) The apparatus of claim 21, wherein the means for allocating a virtual connection unit pair to the connection includes[[:]] means for selecting the virtual connection unit pair from a virtual connection unit pair pool[[;]] and wherein the physical connection unit pair comprises a send and receive queue for accessing the connection ~~means for associating a virtual connection unit pair identifier of the virtual connection unit pair with a physical connection unit pair of the first node~~.

26. (Cancelled)

27. (Currently amended) The apparatus of claim ~~26~~ 21, wherein ~~a~~ the physical connection unit pair associated with the first node is not placed in a time-wait state.

28. (Currently amended) The apparatus of claim ~~26~~ 21, wherein a physical connection unit pair associated with the first node is used to establish another connection while the virtual connection unit pair is in the time-wait state.

29. (Currently amended) The apparatus of claim ~~26~~ 21, wherein the means for placing the virtual connection unit pair in a time-wait state includes means for setting an availability bit associated with the virtual connection unit pair.

30. (Original) The apparatus of claim 25, wherein the virtual connection unit pair is selected from virtual connection unit pairs in the virtual connection unit pair pool that are not in a time-wait state.